DOCUMENT RESUME

ED 340 078 CS 507 686

AUTHOR Wright, Kelly Jo
TITLE How Educational Are the Educators: A Content Analysis of Informative Speaking Ballots.
PUB DATE Oct 91
NOTE 13p.; Paper presented at the Annual Meeting of the Speech Communication Association (77th, Atlanta, GA, October 31-November 3, 1991).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Content Analysis; *Debate; Educational Research; Higher Education; *Judges; Persuasive Discourse; *Student Evaluation; Undergraduate Students
IDENTIFIERS Debate Coaches; *Debate Tournaments; Statistical Package for the Social Sciences

ABSTRACT

A study investigated the extent to which forensic judges used educational comments when writing ballots. A total of 140 informative speaking ballots were collected from tournaments in Mississippi, Colorado, and Arkansas. After the ballot comments were sorted into five categories (basic comments, educational comments, descriptive comments, personal comments, and questions), the coded information was entered into the Statistical Package for the Social Sciences (SPSS) computer statistics program. The SPSS program was used to figure the percentage of each categorized comment per ballot, and the average of each category overall. Results showed that basic comments made up almost one-half (47%) of the comments, followed by educational comments (30%), and with the other 3 categories totaling 22% of all comments. This meant that over two-thirds of all comments were non-educational in nature. Results also showed a definite relationship between ballot rank and the number of comments in specific categories. Results imply that the only way to solve the problems of inadequate comments on judging ballots is through awareness and training, as some judges are unaware of the importance and value of educational comments. Three approaches may help to overcome these problems; (1) provide ballot inserts that explain how to effectively write comments; (2) offer judging workshops; and (3) allow extra time for judges to write comments. (PRA)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED340078

How Educational are the Educators: A Content Analysis of Informative Speaking Ballots

by Kelly Jo Wright
Northwest Missouri State University

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Kelly Jo Wright
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Presented at the Speech Communication Association National Convention October 31 - November 3, 1991

Panel Title: Forensic Judging: New Solutions for an Age-Old Problem

CS507686

BEST COPY AVAILABLE

Every fall, thousands of college students gather on campuses to begin practicing the art of forensics. These students will travel to weekend tournaments throughout the year in an attempt to gain recognition for, and understanding of, their communication skills. Hundreds of judges also participate in forensic tournaments, dividing the good from the not-so-good, and hopefully, providing suggestions through ballot comments on how students can improve. It is intended that these comments be instructional in nature so that the student might learn from them and be able to improve his/her performance. Though not implicitly stated in any rules, competitors and coaches alike have come to expect that judges are responsible for providing an evaluation that will help the student. Cross (1976) states: "Effective learning requires feedback and evaluation," (p. 53). It is an educators obligation to provide instruction through evaluations. While some would argue that it is the coach's responsibility to teach his/her students, the importance of the judge's input is undeniable. Jensen (1989) expands on this, saying:

> While it can be argued that most of what students learn stems from interacting with their team's coaching staff, the benefits are achieved through the critic in each section of any given event. To that extent, it becomes important to examine the feedback received by students (p. 7).

At any given tournament, a person can hear complaints by students after receiving their ballots. Though some may have a high rank, the ballot contains few or no comments. On the other hand, a student who receives a low rank may have a ballot filled with glowing comments. Situations such as these can be confusing and frustrating to students. Inconsistencies on the part of a coach and/or judge can also be confusing. The reasons for useless or inconsistent comments on ballots can be blamed on many things. Some judges, especially those unfamiliar with forensic practices, may be wary of writing educational comments. These comments may be seen as negative as they sometimes appear to criticize. Other judges are intimidated by having to judge an area not necessarily in their field of expertise. An excuse that judges often make concerning ballot inconsistencies is the limited amount of time allotted for writing ballot comments. Many also confuse evaluation with selecting the winner, which is the ranking (1-6) of speeches in a section of competition.

Yet the selection process is not educationally effective by itself. It must be backed up with comments that will help the student improve, for little is learned from numbers alone. As Finn (1990) points out: "Education is the result achieved, the learning that takes root when the process has been effective. Only if the process succeeds and learning occurs will we say that education happened" (p. 596). The process mentioned here is that

of teaching. If an attempt at instruction is not even made on the ballot, then any learning from the ballot is impossible. Gorden (1974) maintains that, "It is essential to zero in on the fact that teaching and learning are really two different functions--two separate and distinct processes," (p. 3). However, the learning process cannot begin until the teaching process has begun, and it is the judge who must start it with evaluation.

Evaluational comments written to a student do not guarantee that the student will make use of them. Even so, most students want to be able to improve and will welcome any suggestions. Judges must write an educational evaluation to ensure that one half of the educational process is complete. The other half, or learning process, is up to the student.

Wilhelms (1967) points out that: "A first criterion of evaluation must be how well it is converted into a genuine feedback to the pupil, whether it leads him steadily toward wiser decisions and actions" (p. 3). If a judge does not feel a student's speech is adequate, he or she must write specifically what is wrong, and, possibly, how to improve it. It is only through educationally sound comments that a judge can start the teaching-learning processes.

I have thus far discussed only the judge's obligations considering educational comments. In order to understand the full impact of good evaluation techniques, the view of the student should also be considered. Although students get instruction from their coach, they rely heavily on judges' comments to improve their performance.

Cowles, Holloway and Keefe, (1989) state, "students perceived the ballot as an instrument of learning," (p. 2). Students should be able to learn what is and isn't working in a performance through comments on a ballot. However, if the comments are limited or unclear, they are of little educational value.

Hanson's (1988) study on Student's Beliefs About Good and Bad Judges found that students want to improve and demand ballots that are educational in nature. "Student beliefs about the traits associated with a "good" judge seem to clearly confirm their interest in being able to have a growth experience from participation in a forensic tournament," (p. 18). Hanson's study also found that the number one trait associated with a "good" judge was: "writes concrete, helpful, truthful comments in a sufficient amount that you can learn from them" (p. 20). A trait associated with a "bad" judge was: "comments which praise but seem insincere, untruthful, unhelpful" (p. 21). Hanson derives from this that, "it is important for judges to try even harder to offer some comments which can lead to growth opportunities for the contestant" (p. 18).

The purpose of this paper is to examine the content of forensic judging ballots in the area of informative speaking. The first concern of the study is to look at the descriptive statistics. The null hypothesis is: there will be no difference between rank and the number of educational-type comments.

JUSTIFICATION

If we, as judges and educators, are going to be able to help students improve, we must know what it is that we ourselves can improve. I believe one of these areas is writing comments. Through educational comments, students have a chance for self-improvement. Keaveney, Leigh, Lewis, and Williams (1984) believe, "the value for students is not the pursuit of the trophy, but the pursuit of excellence in comparison to other individuals or teams" (p. 20). Mills (1983) agrees: "One of the educational benefits to be derived from intercollegiate forensic activities is the ability to receive, adjust to, and learn from criticism" (p. 19).

As educators, we have an obligation to our students. Through this study, I hope to find to what extent judges are using educational comments when writing a ballot. However, if it is found that judges are not using educational-type comments, we as educators must be willing to adapt and change to meet the needs of our students.

METHODS

Procedures

Informative speaking ballots were collected from the tournaments of Pi Kappa Delta Province of the Lower Mississippi tournament at Henderson State University in Arkadelphia, Arkansas; Buffalo Chips tournament at Colorado University in Boulder, Colorado; and the United States Air Force Academy Forensic Classic in Colorado Springs, Colorado. These tournaments were held during the 1989-1990 school year, and were selected based on their convenience. There were a total of 140 ballots. At all three tournaments, novice and senior divisions were combined. Permission was obtained from tournament directors to photocopy all preliminary round ballots.

Two undergraduate communication students were trained as coders. The students practiced their coder skills on ballots taken from the Eastern New Mexico University Forensic team files. After the ballot comments were sorted and categorized by the coders, the coded information was entered into the Statistical Package for the Social Sciences (SPSS) computer statistics program. The SPSS program was used to figure the percentage of each categorized comment per ballot, and the average of each category overall. This will tell if, and approximately how many, educational comments are written per ballot. The statistical analysis compared the percentage of educational comments with the ranking on the ballot.

Coding System

In order for analysis to begin, comments on the collected ballots were sorted and categorized. Separating comments began by defining what a comment was. Judges do not always write comments in the form of complete sentences, and several ideas can overlap

in a single statement. A single comment was defined as any sentence, or fragment thereof, which carries a single idea. Some sentences were divided and considered more than one type of comment. "Good topic" would be considered one comment, while "Good topic and use of gesture" is two.

Ballot comments were sorted into five categories. These were "basic comments," "educational comments," "descriptive comment," "personal comments," and "questions." The categories evolved under the influence of several sources. I first looked at the categories developed in the studies of Carey and Rodier (1987) and Preston (1983), I condensed some of their categories to make new categories compatible with this study. An original category was "educational comments." Once I had a tentative list of categories, I tested them with ballots on file in the Eastern New Mexico University forensic office. After several rounds of changing and adapting categories, I came up with a list of five that would serve the purposes of this study. In developing this system, I found that comments were mutually exclusive and exhaustive to the previously listed categories.

"Basic comments" are comments that reinforce what the speaker is doing. They tend to be positive in nature, such as "Good job," "Timing is nice." Also included in this category are disclosure-type comments. Disclosure-type comments relay a judge's personal preference, such as: "I can't stand intros that start with a quotation."

"Educational comments" are those that offer criticism or advice. They are intended to help a student know where and what to change or alter. "Educational comments" can be simple in nature, such as, "You need to change the introduction," or more explanatory, such as, "You need to change the intro by adding three major points." Another type of educational comment is judge familiarity information. An example is "I know from personal experience that lyme disease is not. . ." Also included in this section are the judges' justification and/or explanation for rank.

"Descriptive comments" are those that aid the judge. These comments include title of pieces, outline, times, and what the speaker is wearing. It should be noted that an outline was considered a single comment. Examples are: "Microwaves" (topic of speech) or "Blue dress, blond hair" (describing a student).

"Personal comments" are written directly to the student. They do not directly pertain to the student performance. Examples are: "Thanks," "Good luck," "Hope to see you at the next tournament."

The final category is "questions." This category was included as it is often difficult to tell whether a "question" is meant to instruct, or is written out of confusion. An example is: "Am I supposed to understand this?"

RESULTS

The null hypothesis (there will be no difference between rank and the number of educational comments) is rejected. There were a total of 140 ballots collected and coded. Of these ballots, 3.6% or 5, were given no rank. This was possibly due to the competitor

not appearing in the round. There were 19.3%, or 27, that were given a first place ranking, 19.3%, or 27, were given second place, 19.3%, or 27, were given third place, 28.6%, or 40, were given fourth place, 8.6%, or 2, were given fifth place, and 1.6%, or 2, were given sixth place. Fourth place has a higher percentage due to judges placing a tie to those ranked fourth, fifth, or sixth. The fifth and sixth rank percentages are lower because of this reason as well, and because of round having less than six competitors.

There were a total of 1,420 comments written on 140 ballots, averaging 10.14 comment per ballot. "Basic comments" totaled 673, making up 47.39% of all comments. "Educational comments" totaled 431, or 30.35% of all comments. There were 227 "descriptive comments" written, making up 15.99% of all comments; 25 "personal comments," making up 1.76%; and 64 "questions," making up 4.51%.

The number of "basic comments" written per ballot ranged from 0 to 13. The mean is 4.807, with a standard deviation of 2.638. Ballots with three or five "basic comments" occurred most frequently, with a 15% occurrence rate. One ballot, or 0.7%, had the highest number of comments per ballot, which was 13. Nine ballots, or 6.4%, had no "basic comments" written on them.

"Educational comments" ranged from 0 to 12 comments per ballot. The mean is 3.079 with a standard deviation of 2.450. These figures are consequently lower, in both mean and range, than "basic comments." Ballots containing two "educational comments" occurred most frequently, with a 17.9% occurrence rate. Ballots with three comments were not far behind, with a 17.1% occurrence rate. One ballot, or 0.7% had the highest number of "educational comments" per ballot, with 12 comments, and ballots that contained no "educational comments" totaled 13.6%.

Judges gave exceedingly fewer "descriptive comments" than to the categories of basic and descriptive comments. The number of comments ranged from 0 to 4, with a mean of 1.621 and a standard deviation of 1.138. Ballots with two "descriptive comments" occurred most frequently, occurring 53.7% of the time. Ballots with four comments occurred least frequently. There were 10 of these ballots, totaling 7.1%. Ballots that contained no "descriptive comments" totaled 19.3%.

"Personal comments" had the fewest number of comments on a ballot, with a range of 0 to 3. The mean is 0.179 with a standard deviation of 0.023. Most ballots did not contain any "personal comments." There were 119, or 85% with no comments. Only 15% of all ballots contained any personal comments, and 12.9%, or 18 of that 15% had just one comment.

The number of "questions" on ballots ranged from 0 to 5. The mean was 0.457 with a standard deviation of 0.945. Most of the ballots, totaling 103, or 74.3%, contained no "questions." Ballots with one "question" were the most frequent, occurring 12.95% of the time. Just one ballot contained four "questions."

When comparing rank to the number of comments on a ballot, fourth ranked ballots contained the most comments, encompassing 30.07% of the 1,420 overall comments. First and second place rankings were almost identical in the number of comments per ballot, totaling 19.15% and 19.01% consecutively. Third ranked

ballots contained 20.49% of all comments. Fifth place ballots had 9.65% of all comments, while sixth place ballots contained 1.41%. Ballots with no ranking surprisingly received several comments, making up 0.21%.

The chi square analysis between rank and "basic comments" is: x^2 (72) = 413.47, $p < .0001$. There were nine ballots that held no "basic comments." It was found that ranks of first and fourth each contained 24.81% of the total number of "basic comments." Second place rank received 21.48% of the comments, and third place had 19.47%. Fifth and sixth places received 7.88% and 1.19% consecutively. The significance was 0.0001.

The chi square analysis between rank and "educational comments" is: (66) = 321.25, $p < .0001$. There were 19 ballots that had no "educational comments." Ballots receiving the rank of fourth place again had the most comments per ballot, with 41.35%. Ballots ranked first had 10.21% of the comments, second place had 15.31%, and third place had 19.49%. Fifth place ballots held 11.83% of the comments, and sixth place had 1.652%. The significance was 0.0001.

The chi square analysis between rank and "descriptive comments" is: (24) = 58.36, $p < .0001$. There were three ballots with no rank that had "descriptive comments," making up 1.32% of the total number of "descriptive comments." There were 25 ballots with no "descriptive comments." Fourth ranked ballots had the highest number of comments, totaling 27.31%. First place ballots held 20.27% of all "descriptive comments," second place held 18.94%, and third place held 21.15%. Ballots ranked fifth received 9.15% of the comments, while those ranked sixth hold 1.76%. The significance was 0.0001.

The chi square analysis between rank and "personal comments" is: (18) = 32.49, $p < .0192$. There were 119 ballots, or 85%, that had no "personal comments" written on them. Of those that did, ballots ranked third and the highest number, with 36%. Ballots ranked fifth held 20% of the comments and second ranked ballots had 24%. Fourth ranked ballots contained only 12% of the comments, the lowest percentage of all categories. Ballots ranked fifth and 8% of the comments and ballots ranking sixth contained no "personal comments." The significance was 0.0192.

The chi square analysis between rank and "questions" is: x^2 (30) = 115.94, $p < .0001$. There were 104 ballots that contained no "question." Third ranked ballots had the most "questions," with 29.7%. First ranked held 15.62% of all "questions," second place held 12.5%, fourth place held 25%, fifth place had 15.62%, and ballots ranking sixth had 1.56%. The significance was 0.0001.

DISCUSSION OF RESULTS

Ballots averaged 10.14 comments. "Basic comments" made up almost one half, 47.39%, of all comments. This category had 242 more comments than the category of "educational comments," which received 30.36%. Judges are writing more "basic comments" than any other type of comment. While the reinforcement that comes

with "basic comments" can encourage students to continue their efforts, students need the value of "educational comments" in order to know what, or how, to improve.

The other three categories, "descriptive comments," "personal comments," and "questions," totaled 22.25% of all comments. These categories, when combined with "basic comments," make up 69.64% of all comments written. This means that over 2/3 of all comments written, with the possible exception of some questions, were non-educational in nature. Only nine ballots contained no comments in the area of "basic comments," and five of these received no rank. This number more than doubles in the area of "educational comments," with 19 ballots having no "educational comments," five of which have no comments at all. This means that at least 14 students were possibly left wondering if, and where, there were areas that could be improved.

When looking at the comparison between rank and comment category, it is important to note that rankings were not evenly distributed. Fourth place rankings claimed 40 ballots, while first, second, and third ranks were placed on 27 ballots each. There were 12 ballots ranked fifth, and only two sixth place ballots.

In the area of "basic comments," judges wrote the most comments per ballot on those ranked first, with 6.1 comments per ballot. This tells us that judges are reinforcing the good performance of a winning speech. The number of "basic comments" steadily decreased in number with rank. This is due to lower ranked performances not being as good and having fewer positive aspects to reinforce.

"Educational comments" had an opposite pattern, tending to increase as rank went down. First place ballots had 1.63 comments per ballot, a difference of 4.47 comments per ballot, when compared to "basic comments." Ballots ranking sixth had 3.5 comments per ballot, 0.5 comments lower than basic comments of the same rank. This shows that judges increased the number of "educational comments" on ballots so that students who needed the most improvement were getting it. It does not suggest that the number of comments is either adequate or inadequate in terms of educating the student. It should be pointed out that the difference between the average number of "basic and educational comments" was 1.57 comments per ballot, with "basic comments" averaging more. This means that judges are writing more "basic comments" than "educational comments."

"Descriptive comments" averaged 1.73 comments per ballot, lower than both basic and educational. Ballots ranking sixth held the most number of comments, with two per ballot. Fourth ranking ballots had the least, at 1.55. These comments tend to give time, the title of the piece, or describe the student. They are basically for the judge's use. I expected them to be much lower than "basic comments," but was hopeful they would be lower than "educational comments," which they were.

The category of "personal comments" had the lowest number of comments, with 0.3 or 42 out of the total, having comments. Ballots ranked first had the highest number of comments per ballot, with one. Sixth ranked ballots had none. Part of the

reason for this, and I take this from personal judging experience, is the "personal comments" tend to be positive. Judges feel most comfortable writing comments like "Good Luck" and "I love judging you," when they really mean it. Most judges would refrain from writing "I hope I never have to judge you again" on a ballot.

"Questions" appear on .52, or a little more than half, of the ballots. Ballots ranked three through six averaged .61 comments per ballot, almost double the average of .34 for the top two ranks. This is due to lower ranking speeches being unpolished, and therefore provoking questions.

I have shown that over 2/3 of all comments written were non-educational in nature. However, in comparing "educational comments" to each category, only the "basic comment" category received more comments that the "educational comment" category.

Although rank had little relationship to the number of total comments on a ballot, there was a definite relationship to the number of comments pertaining to specific categories. I had predicted that "educational comments" would be higher on lower ranked (3-6) performances. This proved to be true with first and second rankings containing only 25.22% of the "educational comments," and third through sixth rankings containing 74.48%.

INTERPRETATIONS

The only way to solve the problem of inadequate comments on judging ballots is through awareness and training. Some judges are unaware of the importance and value of educational comments. This can be overcome in one of three ways. The first is through ballot inserts. Several tournaments already include a description of events with judging ballots. A description on how to effectively write comments is a way to improve on this idea.

Another way to educate judges is through a judging workshop. These workshops can inform judges of the importance of educational comments. This type of workshop would help coaches as well as new judges. There is also the possibility that judging could become more uniform. Judges could be trained as to what makes a comment educational and how to write this type of comment.

If we take the idea of workshops one step further, we find certification. There are already three states that require certification for high school forensic judges. The idea is not as far-fetched as it may seem. In fact, Olson (1980) suggests:

> The need to teach coaches the principles and knowledge necessary to be effective coaches and meet the educational goals for schools is a tremendous one. As teachers of a specialized area of education, specialized courses of instruction are important. One way in which the field of education can help assure that this special training is developed and utilized is through coaches certification. (p. 23)

Though Olson's ideas on coaching were based on coaching sports, these same ideas pertain to forensics. Many schools object to certification because of the use of lay judges.

However, if certification could be attained through the use of a same-day workshop, which I believe it could, the idea is feasible. Individual schools could hold certification classes on campus, prior to a tournament. Done this way, judges would not have to make special arrangements for training, and lay judges would have the chance to become certified. This way every judge would have some type of training.

A final way to help improve the educational quality of forensic ballots is to allow extra time for judges to write comments. An extra five or ten minutes added between rounds could do much to improve the quality of ballots.

Though this study proposed no acceptable level or percentage for educational comments, I believe the level of educational comments found in this study is insufficient. When compared to other categories, it is difficult to tell what would be an acceptable level. I don't think a mandated level is practical. Obviously, lower ranking performances have more room for improvement than higher ranking ones. I would suggest that at least 40% of the comments on high ranking ballots be educational. That number should increase, to perhaps 60-80%, on lower ranking ballots. Suggesting, and not mandating these numbers, will at least allow judges to be conscious of, and radiate from, a number.

This brings up the question of the quality of educational comments. This study divided comments into different types of comments, but did not examine the different levels of quality in educational comments. I should argue that there are differences. "Your intro doesn't work" has minimum educational value, pointing out just the problem. "Your intro doesn't work because of your opening quotation" gives the student more of an explanation. "Your intro doesn't work because your opening quotation is too long" provides a solution. Each can have a different affect on a student. I further believe that the quality of comments should be a factor in determining a ratio for educational/non-educational comments.

I believe that shortage of educational comments on ballots is a problem in forensics today. It is my belief that judges are not living up to their half of the educational process, and students are suffering. Even so, I am also convinced this problem can be treated and be overcome with judge training.

FUTURE RESEARCH

There are three areas of future research that pertain to this study. The first is a qualitative content analysis of educational comments. As previously discussed, there are different types of educational comments. I think it would be beneficial to discover how these comments can be divided, and what types are most prevalent. This could be another means for measuring the educational value of ballots.

A second area of study is the student's use of forensic ballots. As previous literature states, education is a two step process. If judges are writing educational comments, we need to find out if students are using them. It would also be helpful to know if specific forms of educational comments are more effective

than others. This information could help structure guidelines for judges' comments. It could also be helpful in teaching students how to use ballot comments.

A final area of study might be a comparison content analysis between educational comments on interpretive event ballots and public speaking event ballots. This could show if there is any difference between the types of educational comments written.

This study has shown that there is a problem with the types of comments forensic judges write on ballots. Judges' ballots are lacking in educational comments which could help a student improve. If the problem is ignored, it will only increase, and there is no hope that students will one day look forward to receiving their ballots. Yet, if coaches and judges can stop talking about the problem and start doing something about it, perhaps the possibilities for forensic students improving their performance through ballot comments will brighten.

BIBLIOGRAPHY

Carey, J., and Rodier, R. (1987, November). Judging the judges: a content analysis of interpretation ballots. Paper presented at the annual meeting of the Speech Communication Association, Boston, MA.

Cross, K. P. (1976). Accent on learning. London: Jossey-Bass Publishers.

Finn, C. E., Jr. (1990, April). The biggest reform of all. Phi Delta Kappen, 71, 584-592.

Gorden, T. (1974). T.E.T. Teacher effectiveness training. New York: Peter H. Wyden.

Hanson, C. T. (1988). Students' beliefs about good and bad judges. The Forensic, 74(2), 13-21.

Holloway, H., Keefe, C., and Cowles, R. (1989) Who are Pi Kappa Deltans? The Forensic, 74(2), 1-12.

Jensen, S. L. (1989). A categorical analysis of original speaking even ballots. Unpublished manuscript. University of Missouri.

Keaveney, M. M., Leigh, M. G., Lewis, T. V. and Williams, D. A. (1984). Evaluating oral interpreting events: A contest and festival perspective symposium. National Forensic Journal, 2(1), 19-32.

Mills, N. H. (1983). Judging standards in forensics: Toward a uniform code in the 80's. National Forensics Journal, 1(1), 19-31.

Norusis, M. J. (1987). The SPSS guide to data analysis. Chicago: SPSS, Inc.

Olson, M. (1980, December). The construction and evaluation of a coaching education curriculum. Dissertation presented to the department of Physical Education, Brigham Young University.

Preston, C. T., Jr. (1983, April). Judging criteria for intercollegiate limited preparation speaking events. Paper presented at the Annual meeting of the Central States Speech Association, Lincoln, NE.

Wilhelms, F. T. (Ed.). (1960). Evaluation as feedback and guide. Washington, DC: Association for Supervision and Curriculum Development, NEA.